

REMARKS

In the Office Action mailed November 12, 2008 the Office noted that claims 1-11 were pending and rejected claims 1-11. Claims 1 and 2 have been amended, no claims have been canceled, claims 12 and 13 are new, and, thus, in view of the foregoing claims 1-13 remain pending for reconsideration which is requested. No new matter has been added. The Office's rejections and objections are traversed below.

REJECTIONS under 35 U.S.C. § 102

Claims 1-2 and 10 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Hornick, U.S. Patent No. 5,255,184. The Applicants respectfully disagree and traverse the rejection with an argument and amendment.

Hornick discusses an itinerary as a group of legs (it may be a single leg) between an origin and a destination. Each itinerary comprises fare classes. A booking limit is assigned to each fare class for a given itinerary. Booking limits are not static and this confers the airline the ability to maximize its revenue. For example, if the demand is high for an itinerary/class pair having high revenue yield, then the booking limits for this pair will be increased and the booking limits of less profitable pairs will be reduced. See Hornick col. 5, lines 2-8, wherein it states "The seat inventory control system 5 processes the flight network

database 6 to assign seats in a particular flight leg to one or more itinerary/fare class combination."

Claim 1 has been amended to recite "[a] method for determining the number of transport seats available in a computerized reservation system, whereby said system includes means for storing data on services that provide transportation between two locations and their current reservation status, broken down by class of service, a method in which, at a predefined level of expected revenue (Y), a number of seats locally available $av_{Fik}(Y)$ is determined for a given class of service (k) on a given transport service (F_i) **between said two locations**, wherein at least one other class of service (k') of another transport service (F_j) **between said two locations** is selected; the number of locally available seats $av_{Fjk'}(Y)$ is determined for the class of service (k') of the another transport service (F_j) at the predefined level of expected revenue (Y); for the given class of service (k) on the given transport service (F_i), an overall number of available seats $XFAV_{Fjk}(Y)$ is determined at the predefined level of expected revenue (Y) as a function of the numbers of locally available seats ($av_{Fik}(Y)$, $av_{Fjk'}(Y)$) **determined for the given transportation service (F_i) and the at least another transport service (F_j) between said two locations.**" (Emphasis added to indicate amendment) Support for the amendment may be found, for example, in ¶¶ 0011 and 0052 and Fig. 4 of the printed

publication version of the Specification. See also ¶ 0117.
Claim 2 has likewise been amended.

The Applicant acknowledges that Hornick discusses booking limits, levels of expected revenue and methods for maximizing the revenues. Further, Hornick also discusses flight legs that are dependent of other flight legs and that dependency issues are taken into account for availability computations.

However the Applicants disagree that this could be similar to the seat availability determination of the invention. In particular Hornick discloses booking limits assigned to each itinerary/fare class in the flight network database (see col. 5 lines 46-49). But itinerary/fare class components are not to be analogous to transport service/class of service components of the invention.

The Applicants disagree that no limitation is claimed as to the fact that the seat availability calculations are linked to other legs. Amended claim 1 clearly indicates that a class of service of another transport service is selected, that the number of locally available seats av_{Fjk} is determined for this another transport service and that the overall number of available seats $\times F_{av}$, takes into account the availabilities of the other transport service.

However, the Specification clearly indicates that "another transport service" practically means "another

flight."

Further, Hornick defines the following terms:

- Flight legs, corresponding to the transport services of the invention (a flight operated by a carrier between two locations is a flight leg);

- Itineraries, each corresponding to an association of flight legs (see Hornick col. 5 line 4); i.e. a combination of flight legs between the two locations but including correspondences between the two locations. Complex itinerancies made of a series of flight legs are common for long-haul passengers (see Hornick col. 1 lines 50-54); and

- Fare classes, corresponding to the classes of service of the invention and defining the categories of services offered by the airlines for a flight or for an itinerary.

The problem to be solved in Hornick is the sharing of seat availabilities of the flight legs (L1, L2, L3, L4) between the itineraries comprising these flight legs as shown in the following figure. Itineraries are here series of flight legs. For example, the flight leg L2 (NYC - PAR) is shared by itineraries h and l.

HORNICK

Flight Legs: Los Angeles (LA) $\xrightarrow{L_1}$ New York City (NYC)
New York City (NYC): $\xrightarrow{L_2}$ Paris (PAR)
New York City (NYC): $\xrightarrow{L_3}$ London (LON)
Paris (PAR): $\xrightarrow{L_4}$ Munich (MUN)

Itineraries: $I_1 = L_1 + L_2 + L_4$
 $I_2 = L_1 + L_3$
 $I_3 = L_2 + L_4$
 $I_4 = L_1$

Fare classes: Economy (E) \rightarrow $I_1(E), I_1(B)$ $I_3(E), I_3(B)$
Business (B) $I_2(E), I_2(B)$ $I_4(E), I_4(B)$

The actual seat capacity of L_1 is shared between I_1, I_2, I_4 .
The actual seat capacity of L_2 is shared between I_1, I_3 .
The actual seat capacity of L_3 corresponds to I_3 .
The actual seat capacity of L_4 is shared between I_1, I_3 .

The main objectives of classical revenue management systems is to determine how to share the seats of a flight leg (L_2 for example) between the itineraries (I_1, I_3) comprising the flight leg. This could be performed on a "first-arrived - first-served basis" until all the available seats (actually capacity of the plane of the flight leg) are booked. This is of course not optimized since it does take into account any yield parameter. Hornick, like classical revenue management systems tries to define the best sharing process to share the seat capacities of the flight legs between the itinerary/fare classes' components, in view of potential revenue parameters.

Booking limits are specified for each itinerary/fare class and the seats of the flight legs are assigned to one or

more itinerary/fare class combinations (see Hornick col. 5, lines 10-14).

This seat assignment is constrained by the actual capacity of the flight legs. If the bookings are such that the capacity is reached, then no further reservation can be accepted for this leg. Booking limits are set accordingly. See Hornick col. 6, lines 47-52: "Booking limits Sp^i must be set... subject to the constraint that the total number of seats authorized for sale on each flight leg is exactly equal to the capacity of the leg" This is the capacity constraint corresponding to formula (2) in HORNICK.

The present invention as embodied in the claims differs from Hornick in that it focuses on flights having the same origin/destination locations (services that provide transportation between two locations as indicated in amended claim 1). It is notably the case for flights between two points and having close departure times.

In contrast to Hornick, the present claims do not aim to sharing the seat capacity of a flight between itineraries.

The difference is shown in the shown below:

INVENTION

Flights (transport service): Los Angeles (LA) $\xrightarrow{F1}$ New York City (NYC)
Departure 7:05 am

Los Angeles (LA) $\xrightarrow{F2}$ New York City (NYC)
Departure 7:20 am

Fare class (Class of service): Economy (E)
Business (B)

Global number of available seats $XF_{AVF1(E)} = AV_{F1(E)} + AV_{F2(E)}$
(In economy, for F_1)

It clearly shows that the invention processes seat availabilities in consideration of "parallel" (having the same origin/destination) flights and not in view of availabilities sharing between itineraries.

The seat capacity of a flight leg is actually "enriched" with the seat capacity of another flight leg. This corresponds to the last feature of claim 1 where the overall number of available seats for one flight takes into accounts the available seats of another flight.

This has nothing to do with Hornick and classical revenue management systems. While Hornick states that seats cannot be offered to the clients when the flight capacity is reached (see capacity constraint of Hornick col. 6 lines 49-52), the invention increases the number of seats which can be offered to the client for one flight even of the actual capacity of the flight is reached.

In summary the transport services of claim 1 is not

analogous to the itineraries of Hornick. The transport services which are concerned are between the same locations. Lastly, the seat availability of one transport service is increased by taking into account the seat availability of another transport service, so that the seat capacity of one transport service is virtually increased.

For at least the reasons discussed above, claim 1 and the claims decedent therefrom are not anticipated by Hornick.

As regards claim 2, the overall number of available seats is determined by adding up the numbers of seats available locally for the given transport service and the at least another one. This sum is not disclosed by Hornick. In addition, it clearly leads to a result (a number of available seats) superior to the actual capacity of the given transport service (or flight leg in Hornick) so that it is not compatible with the capacity constraint described in Hornick (see formula 2 col. 7).

Withdrawal of the rejections is respectfully requested.

REJECTIONS under 35 U.S.C. § 103

Claims 3-9 and 11 stand rejected under 35 U.S.C. § 103(a) as being obvious over Hornick in view of Talluri, U.S. Patent No. 6,263,315. The Applicants respectfully disagree and traverse the rejection with an argument.

Talluri discusses bid prices as a method to accept or reject reservation requests according to pre-set values. As discussed in Talluri booking limits are adjusted to the capacity conditions of the leg considered as an unique and separate entity (no calculation is linked to other legs). See Talluri col. 2, lines 36-48.

Thus, Talluri is directed to revenue management system like Hornick but it relates to a bid price technique and not the booking limits technique of Hornick. The teachings of Hornick and Talluri are therefore not easily combinable because they relate to two distinct solutions for optimizing revenues.

In Talluri the Office again associates seat sharing between itineraries and the invention. However, in Talluri col. 1 through col. 2, the process is identical to the one described in more details in Hornick: starting from the flight capacity (see parameter "c" in col. 1 line 65), the system assigns the seats to itinerary/fare class combinations to define booking limits for each itinerary/fare class combination. This assignment is made according to revenue optimization parameters. This is still a sharing of seats between itineraries.

Talluri fails to disclose a boundary transfer value (SP max) as in claim 3 as Talluri fails to disclose a transfer of seat availability. Talluri col. 2 lines 10-14 only

discloses sharing seats between itinerary/fare class combination by setting booking limits. Booking limits are numbers of seats is available for reservation for a given itinerary/fare class combination but are not numbers of seats transferable from one flight to another to increase the overall number of available seats.

Therefore, Talluri does not anticipate the feature of claim 3 and claim 3 does not derive from the teachings of Hornick and Talluri.

The same applies *mutatis mutandis* for claims 4 to 9 which comprise additional features about the manner the transfer of capacity is done. Talluri does not disclose any transfer of capacity between flight having the same origin and destination. Talluri only discloses sharing the capacity of one flight between itinerary/fare class combinations.

Therefore, for at least the reasons discussed above, Hornick and Talluri, taken separately or in combination, fail to render obvious the features of claim 3-9 and 11.

Withdrawal of the rejection is respectfully requested.

NEW CLAIM

Claims 12 and 13 are new. Support for claims 12 and 13 may be found, for example, in ¶¶ 0044 and 0045 of the printed publication version of the Specification. The

Applicants submit that no new matter is believed to have been added by the addition of claims 12 and 13. The prior art fails to disclose that the transport service is a single flight.

SUMMARY

It is submitted that the claims satisfy the requirements of 35 U.S.C. §§ 102 and 103. It is also submitted that claims 1-13 continue to be allowable. It is further submitted that the claims are not taught, disclosed or suggested by the prior art. The claims are therefore in a condition suitable for allowance. An early Notice of Allowance is requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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